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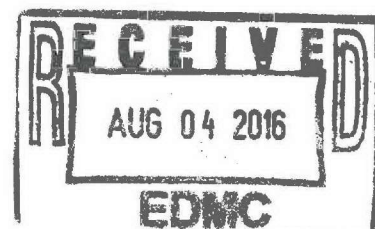
# M-045-82 Tier 1, 2, and 3 WMA C Closure Plan Submittal Milestone Meeting

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Ecology Building

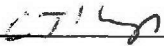
Richland, Washington

June 2, 2016

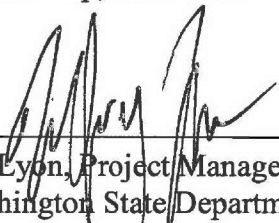


## CONCURRENCE SIGNATURES

The undersigned indicate by their signatures that these meeting minutes reflect the actual occurrences of the above dated meeting.

  
\_\_\_\_\_  
Chris Kemp, DOE-ORP

Date: 8-4-2016

  
\_\_\_\_\_  
Jeff Lyon, Project Manager,  
Washington State Department of Ecology

Date: 8-2-16

## Meeting Minutes

**Date of Meeting:** June 2, 2016

**Purpose:** Continue discussions to resolve the dispute regarding Hanford Federal Facility Agreement and Consent Order (HFFACO) Milestone M-045-82.

**Location:** Washington State Department of Ecology (Ecology) Conference Room 3A.

**Attendees:** Jim Alzheimer – Ecology

Ryan Beach – ORP

Michael Cline – RL

Chris Kemp – ORP

Jeff Lyon – Ecology

Dan Parker – WRPS

John Price – Ecology

Paul Rutland – WRPS

Maria Skorska – Ecology

Michael Turner – MSA

Mign Walmsley – Ecology

Cheryl Whalen – Ecology

**Discussion:** An attendance sheet was circulated (Attachment 1). Chris Kemp noted that this was the first of two additional meetings which had been proposed at the May 25, 2016, meeting concerning the dispute on HFFACO Milestone M-045-82. Mr. Kemp noted that for this meeting, the DOE/WRPS attendees had come to listen to Ecology.

John Price began the discussion for Ecology by addressing a subject from the May 25 meeting. At the May 25 meeting, DOE's interpretation of the April 11, 2016, letter from Ecology providing Ecology's comments on the Tier 1 Closure Plan – Single Shell Tank (SST) System (Attachment 2) had been discussed. Mr. Price indicated that the April 11, 2016, letter was being misinterpreted by DOE. The intent of specific comment 3b of the April 11, 2016, letter was discussed. A great deal of data had been collected since the Tank Closure and Waste Management Environmental Impact Statement (TC&WM EIS) modeling was completed. Ecology would like to have the TC&WM EIS model updated with the newer residual data and rerun. Following some discussion of this proposal, Mr. Price asked Jeff Lyon to discuss this proposal.

Mr. Lyon said that a great deal of time and cost on the part of Ecology had gone into the TC&WM EIS model and that the model should be updated with the new residuals from C Farm and rerun. Mr. Kemp and Mike Cline explained that other things (e.g., treatment impacts) besides the inventory data would need to be changed and that DOE is hesitant to create an additional model which would conflict with the ongoing modeling. The TC&WM EIS model would need to be updated in other ways to be consistent with current information. Mr. Kemp apologized that Mary Burandt was not at the meeting, but explained she had dual roles and has a large workload due to her manager being out.

He said he needs to touch base with Ms. Burandt on this issue of the TC&WM EIS modeling.

Conversation continued as to what would be required for an update of the TC&WM EIS model and what Ecology was specifically requesting. Mr. Kemp noted that “at first blush,” DOE would be elevating this issue for resolution. It was noted by Ecology that Mr. Kemp had previously stated (in the May 25, 2016 meeting) that to update the data and rerun the TC&WM EIS model would take approximately about a year. Mr. Kemp and Mr. Cline left the conference room to have a private conversation. Upon returning to the conference room, Mr. Kemp said that neither he nor Mr. Cline recollect saying that it would take a year for such an update. Ecology said that Mr. Cline had not been at the meeting. Conversation continued regarding where such a statement could have been made and what it could have actually been meant to convey. Mr. Kemp asked Dan Parker if he recalled hearing the statement at the May 25, 2016, meeting, and Mr. Parker said he did not. Chris Kemp took an action to get the draft minutes from the May 25, 2016, meeting distributed for review.

Mr. Lyon was asked to discuss the proposal he had developed for the meeting. Mr. Lyon had prepared a proposal for preparing WMA C closure documentation which was distributed to the attendees (Attachment 3). This was a proposal from Mr. Lyon for discussion at this meeting. Mr. Lyon then led the discussion of the proposal item by item. Notable discussions of the items are discussed below:

- Attachment 3 item C: Comments on the *Clean Closure Practicability Demonstration for the Single-Shell Tanks* (DOE/ORP-2014-02) are being compiled by Ecology. Ecology expects comments will be transmitted to DOE by the end of June 2016. Ecology expectation is that comments on DOE/ORP-2014-02 could be resolved by December 31, 2016.
- Attachment 3 Item D: Ecology would like to reach an agreement on the contents of the Corrective Measures Study (CMS), and Tier 2 and Tier 3 closure plans by October 1, 2016.
- Attachment 3 Item E: Ecology asked if the closure plans from DOE’s Idaho Site were considered when developing the outlines and proposed content for the Tier 1, 2, and 3 closure plans. ORP/WRPS replied that they had considered the Idaho closure plans as well as the non-RCRA closure plans from the Savannah River Site. It was noted that the Idaho closure plans were felt to be not particularly applicable as they were for clean closure of none leaking tanks.
- Attachment 3 Item 3: Ecology believes that the draft IPA should include agreed to sensitivities and scenarios, and at a minimum include; (3a) waste values from *Hanford C-Farm Leak Assessment Report* (RPP-ENV-33418), (3b) soil structures with “micro” layering, (3c) a WM&TC EIS STOMP run and integration of tank releases with groundwater evaluated at some point of analysis (this must have a basis and discussion of the variation between the TC&WM EIS model and IPA



inputs), (3d) and a comparison of TC&WM EIS assumptions and the 2016 PA model inputs. Mr. Kemp said that 3(a) waste volumes from the leak assessment report, and 3(b) soil micro-layering would be addressed, but that he didn't understand enough about what was being requested in item 3(c) to say whether it was being included or not in the IPA. In response to 3(d) regarding a comparison of TC&WM EIS modeling and the 2016 PA model results, Mr. Kemp said that had been completed through *Summary Analysis Waste Management Area C Performance Assessment Vadose Zone and Groundwater Flow and Transport Analysis* (Summary Report). Mr. Kemp took an action to resend the Summary Report which includes this information.

- Attachment 3 Item 4: ORP noted that the specified date for revision of the IPA (i.e., September 28, 2017) was not likely to be achieved. A fairly large number of stake-holders are expected to comment on the IPA. Reaching resolution on those comments and revising the IPA will take more time than would be allotted if the proposed date was to be met.
- Attachment 3 Item 5: The schedule for submittal and contents of Tier 3 closure plans was discussed. ORP said that in order to complete the Tier 3 closure plans, Retrieval Data Reports for the C Farm tanks would be needed, as well as information from characterization/examination of the C-301 Catch Tank, the seven diversion boxes, and the four CR Vault tanks. It will take time to gather that information and figure out what is to be done to close each of these structures, and then to write closure plans.

Ecology asked if ORP had a clear idea as to what would need to be included in the various closure plans. It was noted that ORP did, but the April 11, 2016, letter (16-NWP-066) has led them to believe DOE and Ecology have different expectations. Meetings had been held among ORP, WRPS, and with Ecology on the content of the various tiers of closure plans; and that the outlines for the Tier 2 and Tier 3 closure plans had been provided to Ecology by ORP after one of the March meetings. Mr. Kemp and Ryan Beach will provide copies of the meeting minutes concerning closure plan content and resend the previously provided outlines for the Tier 2 and Tier 3 closure plans.

- Attachment 3 Item 6: The need for a temporary surface barrier that could be placed over the mostly closed WMA C until the final closure cap (projected to cover a number of farms in 200 East Area) can be placed was discussed. It was noted that Ecology would need to have that proposal so that it could be included in the permit modification to include the Tier 2 closure plan. The current thinking by ORP/WRPS is that an interim surface barrier would be designed and constructed that could be incorporated into the final closure cap design.

What would be needed to make a closure decision was discussed, as well as what is needed to get the closure plans incorporated into the site wide permit. It was noted that people not in this meeting were needed to help understand that issue and the path

forward. Ecology took an action to meet internally with the permitting side of Ecology, and figure out what is needed and make sure everyone is on the same page.

A schedule prepared by Mr. Lyon (Attachment 4) was next discussed. The schedule represents durations for review and approval of closure documents. Ecology said that two issues for moving forward are deciding how to integrate groundwater and deciding when activities need to be completed. The construction of the ORP-proposed schedule presented at earlier meetings was discussed. The timing of the submittal of Tier 3 closure plans in the ORP-proposed schedule was based in large-part on when information would be available from the various characterization and planning activities. ORP said that consistency in groundwater modeling among ORP and RL is needed. DOE will have to keep that consistency in mind while moving forward on resolution of groundwater modeling issues. The group wants to get WMA C closed, but need to come to agreement as to what body of information is needed to make that happen.

In response to a question from Mr. Lyon, Cheryl Whalen and Mr. Cline discussed plans to elevate the groundwater modeling issues for resolution. The subject had been broached in earlier in the meeting and Mr. Lyon said he wanted to understand what was happening in this area.

In response to a question from Mr. Lyon regarding Baseline Risk Assessment (BRA) issues. Mr. Kemp said that those issues have not yet been elevated, but soon will be. A number of issues from the review of the WMA C RFI will be elevated as they effect general principles for the central plateau.

Mr. Lyon said that when DOE makes a decision on modeling using the TC&WM EIS, he would like to understand the issues and decision.

**Action Items:**

- 1) Send the draft minutes from the May 25, 2016, meeting to attendees for review. (Kemp)
- 2) Resend the Summary Analysis to Ecology staff (Kemp)
- 3) Provide copies of the meeting minutes concerning closure plan content (Kemp)
- 4) Resend the outlines for the Tier 2 and Tier 3 closure plans to Ecology (Beach).
- 5) Ecology to get together internally to make sure everyone is in agreement on the path forward for incorporation of the closure plans into the site-wide permit. (Ecology)



Attachment 1  
Meeting Attendance Sheet  
(1 Page)

June 2, 2016 Tier 1/2/3 Discussion

John Price	Ecology	372-7921
Jim Alkelmar	ECY	372-7982
Paul Rutland	WRPS	539-1332
Chris King	DOE-ORP	509-373-0649
Maria Skorska	ECY	372-7891
Cheryl Whalen	ECY	372-7972
MB Walmsley	Ecology	509.372.7938
Ryan E. Beach	ORP	509.376-9291
DAN PARKER	WRPS	509-372-0766
Michael Cline	DOE-RL	509-376-6070
Jeff Lyon	Ecology	509 372-7914
Michael Turner	MSA-TPA	376.2872

**Attachment 2**  
**Letter from Ecology providing Ecology's comments on the Tier 1 Closure Plan – Single**  
**Shell Tank (SST) System**  
**(7 Pages)**



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

April 11, 2016

16-NWP-066

Mr. Kevin W. Smith, Manager  
Office of River Protection  
United States Department of Energy  
PO Box 450, MSIN: H6-60  
Richland, Washington 99352

Re: Department of Ecology's (Ecology) Response Comments for the *Tier 1 Closure Plan Single-Shell Tank (SST) System*, RPP-RPT-58858, Revision 1

Reference: See page 2

Dear Mr. Smith:

Ecology recognizes and appreciates the submittal of the *Tier 1 Closure Plan SST System*, RPP-RPT-58858, Revision 1 (reference 1), in partial completion of Hanford Federal Facility Agreement and Consent Order (HFFACO) Milestone M-045-82 requirements. This milestone, currently in dispute, requires the United States Department of Energy (USDOE) to: "Submit complete permit modification requests for Tiers 1, 2, & 3 (see Appendix I) of the SST System, to support final closure requirements for WMA C." USDOE submitted only a Tier 1 Closure Plan SST System with references.

Ecology has determined that the Tier 1 Closure Plan SST System, RPP-RPT-58858, Revision 1, does not provide sufficient information to complete a modification to the Hanford Site-Wide Permit for the Single-Shell Tank System. Because these unfit-for-use tanks will continue to store a large volume of waste for a number of decades (Milestone M-045-00), the *Tier 1 Closure Plan SST System* must contain details of the information identified in HFFACO Appendix I (*SST System Waste Retrieval and Closure Process*) and information demonstrating tank waste will be safely managed during this extended closure period to ensure ongoing protection of human health and the environment (Washington Administrative Code 173-303-610(4)).

The enclosure provides comments based on our initial review, and identifies the subject matter required to complete the review and permit modification process included in HFFACO Appendix I, Section 9.2 (Document Review and Comment Process). Because Ecology finds the scope of the submitted Tier 1 Closure Plan SST System insufficient, our attached comments should not be considered a final review. Rather, comments are provided as an initial review of the information gaps we have identified for the Tier 1 Closure Plan SST System.

Also, because USDOE references the USDOE submittal of the *Clean Closure Practicability Demonstration for the Single-Shell Tanks*, DOE/ORP-2014-02, Ecology will provide a separate response letter to that submittal (reference 2).



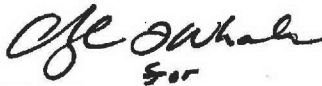
Mr. Kevin W. Smith  
April 11, 2016  
Page 2

16-NWP-066

After USDOE has reviewed our comments, Ecology requests a meeting to further discuss our concerns, identify additional details of the information needed, and develop a path forward for finalizing the Tier 1 Closure Plan SST System and providing a complete permit modification submittal.

Please contact me at [jeff.lyon@ecy.wa.gov](mailto:jeff.lyon@ecy.wa.gov) or (509) 372-7914 to plan a meeting, or if you have questions.

Sincerely,



Jeffery Lyon  
Tank Systems Operations and Closure Project Manager  
Nuclear Waste Program

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Enclosure: Review Comments for Tier 1 Closure Plan Single-Shell Tank System

Reference 1: Letter 15-ECD-0042, dated September 30, 2015, "Submittal of the Tier 1 Closure Plan for the Single-Shell Tank System"

Reference 2: Letter 15-NWP-103, dated June 3, 2015, "Letter 14-ECD-0030, dated July 23, 2014, from K. W. Smith, USDOE-ORP, to J. A. Hedges, Ecology, "Transmittal of Clean Closure Practicability Demonstration for the Single-Shell Tanks, DOE/ORP-2014-02"

cc electronic w/enc:

Dennis Faulk, EPA  
Ryan Beach, USDOE  
Mary Beth Burandt, USDOE  
Joanne Grindstaff, USDOE  
Chris Kemp, USDOE  
Jon Perry, MSA  
Lucinda Borneman, WRPS  
Neil Davis, WRPS  
Jessica Joyner, WRPS  
Mark Lindholm, WRPS  
L. David Olson, WRPS  
Dan Parker, WRPS  
Paul Rutland, WRPS  
Suzette Thompson, WRPS  
Rebecca Wiegman, WRPS  
Ken Niles, ODOE  
Jim Alzheimer, Ecology  
Suzanne Dahl, Ecology  
Kelly Elsethagen, Ecology  
Jeffery Lyon, Ecology

cc electronic w/enc:

Maria Skorska, Ecology  
Mign Walmsley, Ecology  
Cheryl Whalen, Ecology  
Environmental Portal  
Hanford Facility Operating Record  
USDOE-ORP Correspondence  
Control  
WRPS Correspondence Control

cc w/enc:

Steve Hudson, HAB  
Administrative Record  
NWP Central File

cc w/o enc:

Rod Skeen, CTUIR  
Gabriel Bohnee, NPT  
Alyssa Buck, Wanapum  
Russell Jim, YN  
NWP Reader File



**Enclosure - Review Comments on Tier 1 Closure Plan Single-Shell Tank System**

## **1.1 GENERAL COMMENTS**

The Tier 1 Closure Plan SST System must describe the following:

1. How closure of the SSTs and ancillary equipment will be integrated with:
  - a. Cleanup of contaminated soil and groundwater; (soil cleanup through Remedial Investigation/Corrective Measures Study process, and groundwater cleanup through a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Record of Decision);
  - b. Planning for integrating overall Central Plateau cleanup actions;
  - c. The Closure Plan SST System (Tiers 1, 2, and 3), and incorporation of these decisions in the Site-Wide Permit.
2. Results of the clean closure practicability demonstration for the single-shell tanks, and performance assessment (per HFFACO, Appendix I) in the Tier 1 Closure Plan SST System.
3. Processes described in the SST WMA C Resource Conservation and Recovery Act/CERCLA integration white paper.
4. How HFFACO Appendix H, Single Shell Tank Waste Retrieval Criteria Procedure will be implemented.
5. Other regulatory requirements for closure, and how they are met, including the High Level Waste-Waste Incidental to Reprocessing determinations for contaminated soils and tank residuals (HFFACO Appendix I, sections 2.5 and 3.1).
6. Given the extensive schedule for closure, information demonstrating USDOE has taken, and will continue to take, all steps to ensure threats to human health and the environment are prevented while closure proceeds.

## **1.2 SPECIFIC COMMENTS**

1. USDOE submitted only the Tier 1 portion of the Closure Plan SST System (with references). Ecology considers the related SST System closure correspondence and other documentation, indicated in the list below, relevant to our review process. The items below should be included as reference material, and the Tier 1 Plan should include an explanation, context and basis for applicability of this information:
  - a. Letter dated August 15, 2006, from J. A. Hedges, Ecology, to R. J. Schepens, USDOE-ORP, "Letter 06-TPD-050, dated July 31, 2006, from R. Schepens, USDOE, to J. Hedges, Ecology, "Request for Temporary Suspension of Single-Shell Tank (SST) System Closure Plan Submittals"
  - b. Letter 04-TPD-092, dated September 28, 2004, from R. J. Schepens, USDOE-ORP, to M. A. Wilson, Ecology, "Submittal of Single-Shell Tank (SST) System Closure Plans to Fulfill Requirements for Hanford Federal Facility Agreement and Consent Order (HFFACO) Milestones M-45-06B and M-45-06C"

- c. Letter dated September 13, 2004, from J. Lyon, Ecology, to R. J. Schepens, USDOE-ORP, "Single-Shell Tank Permit Application: Single-Shell Tank System Closure Plan, RPP-13774, Rev. 2," dated January 19, 2004"
  - d. Letter dated April 5, 2004, from J. Lyon, Ecology, to R. J. Schepens, USDOE-ORP, "Single-Shell Tank 241-C-106"
  - e. Letter 04-TPD-010, dated January 19, 2004, from R. J. Schepens, USDOE-ORP, to M. A. Wilson, Ecology, "Submittal of Single-Shell Tank (SST) System Closure Plan Revision 2"
2. Information identified for submittal in the Draft Hanford Facility Dangerous Waste Permit, Revision 9, SST System Closure Unit Group 4 chapter permit conditions is needed to support a complete permit modification request for incorporating the SST System into the Site-wide Permit. Some of the information is needed to inform closure decisions (e.g., process information). Some of the information requirements are needed in support of the extended closure period to ensure continued protection of human health and the environment from the unclosed but not operating tank systems (e.g., security, monitoring and inspections, training, preparedness and prevention). While some of this information is discussed generally in Section 1.1 of the Tier 1 Closure Plan, this information needs to be detailed and submitted for inclusion in the Site-wide Permit as part of the permit modification request.
  3. When the requirement for a Tier 1 Closure Plan was added to the HFFACO, there was an expectation that specific goals and cleanup actions would be clearly defined (coordinated and integrated) regarding closure of the SST System and associated groundwater units.
    - a. For the practicability demonstration (Clean Closure Practicability Demonstration for the Single-Shell Tanks, DOE/ORP-2014-02), it is important that USDOE provide a complete description of the evaluation and decisions for each WMA in the Tier 1 Closure Plan submittal.
    - b. The Tier 1 Closure Plan SST System must specifically provide a complete description of the coordination and integration for groundwater mitigation as described in the HFFACO, Appendix I. Without a proposed remedy for the 200-BP-5 and 200-PO-1 groundwater operable units (OUs), the Tier 1 SST System Closure Plan submittal must address how coordination and integration of groundwater cleanup with closure of the single-shell tank waste management areas (WMAs) will be conducted. Contamination from WMA C has already reached the groundwater in both the 200-BP-5 and 200-PO-1 groundwater OUs, and will continue to migrate to both of these groundwater units. Supporting closure documents (*such as Performance Assessments (PAs) and Remedial Feasibility Investigations (RFIs)*) must also contain detailed information on the groundwater impacts to 200-BP-5 and 200-PO-1 groundwater OUs from all WMA C sources (*such as soils, tank residuals, and ancillary equipment*). The HFFACO milestones M-015-21A and M-045-82, both due in 2015, would have provided an understanding of the coordination and integration for groundwater mitigation with an SST System closure. However, no proposed plans were submitted for milestone M-015-21A.

4. The 2015 Closure Plan must include definitions of key terms. Ecology recommends using "Key Definitions" from the 2004 Closure Plan, previously reviewed and accepted by Ecology.
5. The 2015 Closure Plan does not define the scope of an SST System closure, and seems to interpret closure of the SST System as not including treatment or removal of contaminated soils and groundwater. This approach is not consistent with the 2004 Closure Plan or Draft Revision 9, Site-Wide Permit condition V.4.G.1.a.
  - The SST permit condition V.4.G.1.a states: "*The Permittees will close the entire SST System, including tanks, ancillary equipment, contaminated soil, and contaminated groundwater, in accordance with the closure performance standards...*"
6. Ecology recognizes that groundwater remediation will be performed pursuant to a CERCLA ROD, developed for an associated groundwater operable unit. However, the Resource Conservation and Recovery Act closure process will be the principal regulatory mechanism for addressing environmental releases associated with the tank farms. Therefore, the 2015 Tier 1 SST System Closure Plan must include the groundwater operable unit process description that will address corrective measures for groundwater as applicable to releases of contamination from individual WMAs. This may include corrective measures specific to a WMA or a set of WMAs, along with closure and post-closure groundwater monitoring systems developed to monitor corrective measures for each WMA.
7. 2015 Closure Plan, Section 1, last paragraph. This section should be expanded to summarize the general content and incorporation of the Tier 1, Tier 2, and Tier 3 closure plans, similar to the Preface of the 2004 Closure Plan:
  - "*Tier 1 - Framework Plan for Single-Shell Tank System Closure: Referred to as the Framework Plan, ... provides a general overview of the single-shell tank system, a general description of the administrative framework and process for closure, including key definitions, and a description of the process for incorporating Tier 2 and Tier 3 with soil and groundwater corrective actions, single-shell tank closure performance standards, an overall closure schedule, and an overall description of the certification and post-closure process.*"
8. 2015 Closure Plan, page 2-2, last paragraph. Define the "operable unit" referenced in this paragraph. Also, revise this paragraph to reflect that contaminated groundwater must be addressed as part of SST System closure, according to the closure performance standard specified in the SST System permit (chapter), permit condition V.4.G.2 (Closure Performance Standards).
9. 2015 Closure Plan, Section 3.2, 2<sup>nd</sup> paragraph. Describe all applicable measures that will be used to protect human health and the environment, rather than referring to "previously described measures..."
10. 2015 Closure Plan, Section 3.2. Describe what groundwater-specific measures will be taken to protect human health and the environment.

11. 2015 Closure Plan, Section 3.2, page 3-3, does not include inspection procedures (see Site-Wide Permit and the 2004 Closure Plan).
12. The 2015 Tier 1 Closure Plan should address treatment, storage, and disposal of retrieved SST System waste. Include a discussion analogous to that found in the 2004 Closure Plan, Section 3.2.2, and a flow chart similar to Figure 3-2.
13. The 2015 Tier 1 Closure Plan should address management of waste generated during remediation and closure of tank systems, including applicability of land disposal restrictions regulations, similar to that found in Section 3.4 of the 2004 Closure Plan.
14. The 2015 Tier 1 Closure Plan should describe the SST System risk evaluation and performance assessment, analogous to that found in Section 4 of the 2004 Closure Plan (SST System Risk Evaluation). The two short paragraphs in Section 4 of the current (2015) closure plan are not an adequate substitute for the 26 pages of detailed discussion in the 2004 closure plan.
15. The 2015 Tier 1 Closure Plan should include a discussion of characterization of individual WMAs, and the SST System for closure, analogous to Section 5 in the 2004 Closure Plan.
16. Ecology recognizes that a schedule is currently under negotiation. However, the current (2015) Tier 1 Closure Plan needs to further include:
  - Discussion of planning and scheduling for SST closure actions;
  - A mechanism showing how to update schedules in closure plans;
  - A high-level description of the HFFACO M-45-00 Milestone series;
  - A flowchart illustrating implementation of these activities.

**Attachment 3**  
**Closure Plan Development and Proposed Process Handout**  
**(1 Page)**

### Closure Plan development and proposed process

- A. Basic needs for a Complete Plan, this is not inclusive, and if there are USDOE or Ecology questions, those should be proposed and discussed, with agreements recorded in the TPA PMM
- B. Tier 1, in review, resolve our comments; assure a good description of GW integration is included, including OU expectations, schedules, and decision process with details on how WMA's will be included in the OU evaluation; includes statement about Practicability decision
- C. **Practicability Demonstration**, needs comments sent, then resolve comments by **12/31/2016**; this will be our internal process to finish Landfill decision for all WMA's
- D. Agreement with Ecology and USDOE on contents and details of **the CMS, Tiers 2&3 by October 1, 2016**, reflected in the TPA PMM potentially get USDOE and Ecology to agree to the CMS contents (look at UPRs, tank leaks, structures, grout formulas, proposed GW monitoring changes)
- E. Good starting point for the contents and details would be to look at the Idaho Closure plan for tanks, DOE/ID-10802, Rev 2, 2008

Tier 2 in Dec 2017, to include the following:

- 1. Include some (preferred 100 and 200 series tanks – as grouped in your proposal) Tier 3's submitted (**03/28/2017**) (or updated PA), an integrated GW model using EIS platform, with the EIS assumptions for Hanford waste sites, and the update Leak Assessment waste numbers for WMA-C PA; this will serve as a cumulative analysis
- 2. The **RFI (12/30/2016)** is submitted and includes a discussion of GW contamination that includes any contaminants identified in the WMA-C GW monitoring network; with evaluation and discussion that identifies any data gaps; and identification, with a basis, potential sources of contamination other than WMA-C
- 3. **IPA (9/28/2016)**, that has agreed to sensitivities, and scenarios, and at a minimum includes
  - a. The waste values from Leak Assessment Report
  - b. The soil structures with the soil "micro" layering
  - c. EIS STOMP run and integration of tank farm waste releases with groundwater, evaluated at some point of analysis; this must have a basis and discussion of the variation between the EIS model and the IPA outputs
  - d. Comparison of EIS assumptions and the 2016 PA model outputs
- 4. **Revision 1, IPA 09/28/2017**
- 5. Schedule for submittals of **Tier 3's** to be completed no later than **10/1/2018**; Proposed general layout of final barrier and specifications provide in PA
- 6. Proposed Temporary Barrier that includes general design specifications and schedule for submitting final design and installation
- 7. Submittal of CMS, getting to get a Rev A of CMS
- 8. ??TPA milestones for **CMS (12/31/2017)** if needed


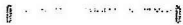
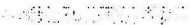

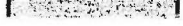


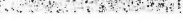










Questions that we all will need to address, is: How can we close the farm without the nature and extent of contamination? Its years away to get the work to complete the investigation (pushes at C-105, C-108); what is the purpose for getting more information? Possibly to be used possibly for predicting pump and treat.

**Attachment 4**  
**Proposed Schedule**  
**(1 Page)**



ID	Task Name	Duration	Start	Finish	2016				2017				2018			
					1st Half		2nd Half		1st Half		2nd Half		1st Half		2nd Half	
					Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4
1																
2	Practicability Derr 6 mons		Wed 6/1/16	Tue 11/15/16												
3	Rev 0 PA	12 mons	Wed 9/28/16	Tue 8/29/17												
4	RFI	12 mons	Fri 12/30/16	Thu 11/30/17												
5	Tier 2	12 mons	Tue 3/28/17	Mon 2/26/18												
6	Rev 1 PA	11 mons	Thu 9/28/17	Wed 8/1/18												
7	CMS	6 mons	Fri 12/29/17	Thu 6/14/18												
8	All Tiers 3	17.5 mons	Tue 3/28/17	Mon 7/30/18												

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Project: Project1 Date: Thu 6/2/16	Task		Inactive Summary		External Tasks	
	Split		Manual Task		External Milestone	
	Milestone		Duration-only		Deadline	
	Summary		Manual Summary Rollup		Progress	
	Project Summary		Manual Summary		Manual Progress	
	Inactive Task		Start-only			
	Inactive Milestone		Finish-only	